Claims:

1. A process for the separation of biomass from lactate and lactic acid-containing fermentation product present in a fermentation broth by:

   a) subjecting the fermentation broth to an alkalifying step;

   b) adding one or more flocculants; and

   c) separating the biomass flocs from the lactate and lactic acid-containing fermentation broth.

2. The process according to claim 1, wherein in the alkalifying step the pH of the fermentation broth is increased to above 9.

3. The process according to claim 1, wherein in the alkalifying step the pH of the fermentation broth is increased to above 10.

4. The process according to claim 1, wherein the mixture obtained in the alkalifying step is aged at a temperature between 25-100°C for a period of time up to 1000 hours.

5. The process according to claim 4, wherein the aging time is above 8 hours and up to 1000 hours.

6. The process according to claim 1, wherein the alkalifying residence time is between 1 second and 4 hours.

7. The process according to claim 6, wherein the alkalifying residence time is between 1 second and 15 minutes.

8. The process according to claim 1, wherein the flocculant is orthophosphoric acid.

9. The process according to claim 1, wherein the flocculant is a polymeric flocculant.

10. The process according to claim 1, wherein steps a) and b) are conducted with agitation.

11. The process according to claim 1, wherein steps a) and b) are combined.

12. The process according to claim 1, wherein the alkalifying step is conducted in-line.

13. The process according to claim 1, wherein step b) is conducted in-line.

14. The process according to claim 1, wherein the biomass precipitate is subjected to one or more washing steps and one or more additional alkalifying and/or flocculant addition steps, followed by separation of the biomass precipitate.

15. A clarified lactate and lactic acid-containing broth prepared by a process, said process including the separation of biomass from a lactate and lactic acid-containing fermentation product present in a fermentation broth by:

a) subjecting the fermentation broth to an alkalifying step;

b) adding one or more flocculants; and

c) separating the biomass flocs from the lactate and lactic acid-containing fermentation broth.

16. Lactic acid purified from a clarified lactate and lactic acid-containing broth prepared by a process, said process including the separation of biomass from a lactate and lactic acid-containing fermentation product present in a fermentation broth by:

a) subjecting the fermentation broth to an alkalifying step;

b) adding one or more flocculants;

c) separating the biomass flocs from the lactate and lactic acid-containing fermentation broth; and

d) purifying lactic acid from the lactate and lactic acid-containing fermentation broth.

17. The lactic acid of claim 16, wherein in the alkalifying step the pH of the fermentation broth is increased to above 10.

18. The lactic acid of claim 16, wherein the mixture obtained in the alkalifying step is aged at a temperature between 25-100°C for a period of time up to 1000 hours.

19. The lactic acid of claim 18, wherein the aging time is above 8 hours and up to 1000 hours.

20. The lactic acid of claim 16, wherein the alkalifying step is conducted in-line and wherein the alkalifying residence time is between 1 second and 4 hours.